

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A fabrication method of a liquid crystal display device, comprising:

providing a substrate;

forming a metal layer on the substrate;

forming a gate photoresist pattern on the metal layer substrate by a first roller printing process;

etching the metal layer using the gate photoresist pattern as a mask to form a gate line;

forming a gate line on the substrate by applying the gate photoresist pattern formed by the first roller printing process;

removing the gate photoresist pattern;

sequentially forming a gate insulating layer, a semiconductor layer, and a high-concentrated N⁺ layer over the substrate and the gate line;

forming an active photoresist pattern on the high-concentrated N⁺ layer by a second roller printing process;

sequentially etching the high-concentrated N⁺ layer and the semiconductor layer using the active photoresist pattern as a mask to form a semiconductor layer pattern and a high-concentrated N⁺ layer pattern, wherein an active region comprises the semiconductor layer pattern and the high-concentrated N⁺ layer pattern;

forming an active region including the high-concentrated N⁺ layer by applying an active photoresist pattern by the second roller printing process, wherein the active region is

~~formed by sequentially removing the high-concentrated N⁺ layer and the semiconductor layer~~
~~using the active photoresist pattern formed by the second roller printing process as a mask;~~

removing the active photoresist pattern;

forming a conductive layer over the active region and the gate insulating layer;

depositing a photoresist layer over the conductive layer;

applying a mask over the photoresist layer, and performing a lithography process, to
form a photoresist layer pattern;

removing the conductive layer by using the photoresist layer pattern as a mask to form
source and drain electrodes;

removing the high-concentrated N⁺ layer pattern above a channel region by using the
~~photoresist~~ photoresist layer pattern as a mask;

removing the photoresist layer pattern;

forming a passivation layer over the substrate and the source and drain electrodes;

forming a contact hole photoresist pattern over the passivation layer by a third roller
printing process;

removing the passivation layer by using the contact hole photoresist pattern as a mask
to form a contact hole exposing the drain electrode;

removing the contact hole photoresist pattern;

forming a pixel electrode layer over the passivation layer and the contact hole;

forming a pixel electrode photoresist pattern over the pixel electrode layer by a fourth
roller printing process; and

removing the pixel electrode layer by using the pixel electrode photoresist pattern as a mask to form a pixel electrode electrically connected with the drain electrode,

wherein each of the first to fourth roller printing processes comprises,

providing a cliché having an intaglio pattern of a groove form;

depositing a predetermining amount of photoresist on the cliché;

rotating a roller on the cliché to transfer the photoresist contained in the cliché onto a surface the roller; and

rotating the roller on the substrate to re-transfer the photoresist contained in the roller onto the substrate thereby forming a photoresist pattern on the substrate.

Claims 2-14 (Cancelled)

15. (Previously Presented) The method of claim 1, wherein the mask applied over the photoresist layer in the step of applying the mask is the only mask applied throughout the method of claim 1.

16-23. (Cancelled)

24. (Currently Amended) A fabrication method of a liquid crystal display device, comprising:

forming a metal layer on a substrate;

forming a gate photoresist pattern on the metal layer by a roller printing process,
forming a gate line on a substrate by applying a gate photoresist pattern formed by a roller
printing process, wherein the roller printing process ~~includes of~~ comprises providing a cliché on
which a resist is deposited, contacting a roller with the cliché in which the resist is contained,
rotating a roller on the cliché, to transfer the resist contained in the cliché onto a surface of the
roller, and contacting the roller with the substrate and rotating on the substrate to retransfer the
resist onto the surface of the roller;

etching the metal layer using the gate photoresist pattern as a mask to form a gate line,
removing the gate photoresist pattern;

sequentially forming a gate insulating layer, a semiconductor layer, and a high-
concentrated N+ layer ~~and a conductive layer~~ over the substrate including the gate line;

forming an active photoresist pattern on the high-concentrated N+ layer by a roller
printing process;

etching the high-concentrated N+ layer and the semiconductor layer using the active
photoresist pattern as a mask to form ~~forming~~ an active region including the semiconductor layer
and the high-concentrated N+ layer by applying an active photoresist pattern formed by the roller
printing process, wherein the active region is formed by sequentially removing the high-
concentrated N+ layer and the semiconductor layer ~~using the active photoresist pattern as a~~
~~mask;~~

removing the active photoresist pattern;

forming a conductive layer over the substrate including the high-concentrated N+ layer
and the semiconductor layer;

forming a photoresist layer on the conductive layer;

patterning the photoresist layer by performing a lithography process to form a photoresist layer pattern;

removing the conductive layer and the high-concentrated N+ layer on a [[the]] channel region by the photoresist layer pattern as a mask to form source and drain electrodes electrically separated from each other, wherein when the source/drain electrodes are formed, a data line and a storage electrode are formed simultaneously by the mask process;

removing the active photoresist layer pattern;

forming a passivation layer over the source and drain electrodes by a roller printing process;

forming a contact hole photoresist pattern on the passivation layer;

etching the passivation layer forming a contact hole in the passivation layer by using the applying a contact hole photoresist pattern as a mask formed by the roller printing process;

removing the contact hole photoresist pattern;

forming a transparent electrode layer over the passivation layer and the contact hole;

forming a pixel electrode photoresist pattern over the pixel electrode layer by a roller printing process; and

removing the transparent electrode layer by using the pixel electrode photoresist pattern as a mask to form a pixel electrode electrically connected with the drain electrode

and

forming a pixel electrode on the passivation layer by applying a pixel electrode photoresist pattern formed by the roller printing process.